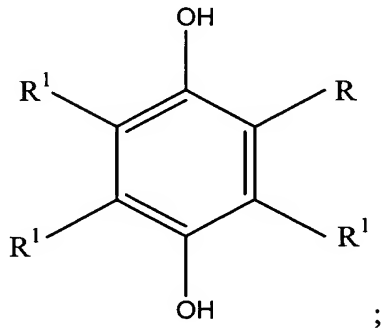
CLAIMS:

1. A continuous process comprising:

contacting a mixture comprising a dihydroxy aromatic compound, water and an alkylating agent with a catalyst system in the presence of a flowing carrier gas, to form a mono alkylated dihydroxy aromatic compound, wherein said catalyst system is obtained by the calcination of a catalyst precursor system comprising a metal oxide precursor, a transition metal element and a pore former.

2. The process of Claim 1, wherein said compound has a formula:



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wherein R is hydrogen and each occurrence of R^1 is independently selected from the group consisting of hydrogen and a hydrocarbyl group selected from the group consisting of an alkyl group containing 1 to about 18 carbon atoms, an aryl group containing about 6 to about 20 carbon atoms, an arylalkyl group containing about 7 to about 12 carbon atoms and an alkylaryl group containing about 7 to about 16 carbon atoms.

3. The process of Claim 1, wherein said dihydroxy aromatic compound is selected from the group consisting of hydroquinone, resorcinol, catechol, 2-methyl hydroquinone, 2,5-dimethyl hydroquinone, 2-ethyl hydroquinone, 2,5-diethyl hydroquinone, 2-tertiarybutyl hydroquinone 2,5-ditertiarybutyl hydroquinone, 2-phenyl hydroquinone, 2-benzyl hydroquinone, 2,3,5-trimethyl hydroquinone, 2-vinyl hydroquinone, 2-isopropyl hydroquinone, 2,5-diisopropyl hydroquinone, and mixtures of two or more of the foregoing dihydroxy aromatic compound.

4. The process of Claim 1, wherein said dihydroxy aromatic compound comprises hydroquinone.

5. The process of Claim 1, wherein said alkylating agent is selected from a group consisting of branched chain or straight chain alkyl alcohols containing 1 to 16 carbon atoms and branched chain or straight chain olefins containing 2 to 16 carbon atoms.

6. The process of Claim 1, wherein said alkylating agent is selected from a group consisting of methyl alcohol, ethyl alcohol, n-propyl alcohol, isopropyl alcohol, n-butyl alcohol, isobutyl alcohol, amyl alcohol, isoamyl alcohol, hexyl alcohol, heptyl alcohol, octyl alcohol, nonyl alcohol, decyl alcohol, lauryl alcohol, cetyl alcohol, cyclohexyl alcohol, cyclohexylmethyl alcohol, ethylene, propylene, 1-butylene, 2-butylene, isobutylene, 1-pentene, 2-pentene, 2-methylpentene-2, 3-methylpentene-2, 1-hexene, 2-hexene, 3-hexene, 1-heptene, 2-heptene, 3-heptene, the isomeric octenes, nonenes and decenes.

7. The process of Claim 1, wherein said alkylating agent comprises methyl alcohol.

8. The process of Claim 1, wherein said metal oxide precursor is selected from a group consisting of magnesium oxide precursor, iron oxide precursor, chromium oxide precursor, vanadium oxide precursor, copper oxide precursor, lanthanum oxide precursor and mixtures of two or more of the foregoing.

9. The process of Claim 1, wherein said metal oxide precursor comprises a magnesium oxide precursor.

10. The process of Claim 1, wherein said metal oxide precursor comprises magnesium carbonate.

11. The process of Claim 1, wherein said transition metal element comprises copper.

12. The method of Claim 1, wherein the pore former is selected from a group consisting of waxes and polysaccharides.

13. The method of Claim 1, wherein the pore former comprises polyethylene glycol.

14. The process of Claim 1, wherein said contacting is carried out at a weighted hourly space velocity of 0.1 to 10.

15. The process of Claim 1, wherein the molar ratio of alkylating agent to dihydroxy aromatic compound is 0.5 to 4.

16. The process of Claim 1, wherein the carrier gas is selected from a group consisting of nitrogen, hydrogen, helium, argon, carbon monoxide and mixtures of two or more of the foregoing gases.

17. The process of Claim 1, wherein monoalkylation of the dihydroxy aromatic compound is carried out at a temperature of 300°C to 500°C.

18. The process of Claim 1, wherein the mixture further comprises a diluent.

19. The process of Claim 18, wherein the diluent is selected from a group consisting of monoglyme, diglyme, triglyme, tetraglyme, butyl diglyme, glycol, polyglycol and dipropylene glycol dimethyl ether.

20. The process of Claim 18, wherein the diluent is monoglyme.

21. The process of Claim 18, wherein the molar ratio of diluent to dihydroxy aromatic compound is about 0.1 to about 10.

22. The process of Claim 1, wherein the catalyst has pores having pore diameters of 100 to 400 Angstroms.

23. A continuous process comprising:

contacting a mixture comprising a dihydroxy aromatic compound, water and an alkylating agent with a catalyst system in the presence of a flowing carrier gas, to form a mono alkylated dihydroxy aromatic compound, wherein said catalyst system has pores having diameters of 100 to 400 Angstroms.

24. The process of Claim 23, wherein said contacting is done at a weighted hourly space velocity of 0.1 to 10.

25. A continuous process comprising:

contacting a mixture of hydroquinone, monoglyme, water and methanol with a catalyst system in the presence of flowing nitrogen gas, to form 2-methyl hydroquinone, wherein said catalyst system comprising magnesium oxide and copper is obtained by the calcination of a catalyst precursor system, wherein said catalyst precursor system comprises magnesium carbonate, copper and poly ethylene glycol.

26. The process of Claim 25, wherein said contacting is done at a weighted hourly space velocity of 0.1 to 10.

27. A polycarbonate comprising subunits derived from the mono alkylated dihydroxy compound prepared according to Claim 1.

28. A polycarbonate produced by melt polymerization of a diphenyl carbonate and a mixture of dihydroxy aromatic compounds comprising a mono alkylated dihydroxy aromatic compound in the presence of a catalyst wherein the mono alkylated dihydroxy compound was prepared by the method of Claim 1.